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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/518,542	05/24/2005	Hartmut Grund	263099US0PCT	2968
22850	7590	12/12/2007		
OBLON, SPIVAK, MCCLELLAND MAIER & NEUSTADT, P.C. 1940 DUKE STREET ALEXANDRIA, VA 22314				
EXAMINER				
JACOBSON, MICHELE LYNN				
ART UNIT		PAPER NUMBER		
4174				
NOTIFICATION DATE		DELIVERY MODE		
12/12/2007		ELECTRONIC		

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

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# Office Action Summary

**Application No.**

10/518,542

**Applicant(s)**

GRUND ET AL.

**Examiner**

Michele Jacobson

**Art Unit**

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --  
**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☐ Responsive to communication(s) filed on \_\_\_\_.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-27 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-27 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some \* c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO/SF/DF)  
Paper No(s)/Mail Date 1/3/05, 3/1/05, 12/7/06, 11/13/07.
- 4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date \_\_\_\_.
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: \_\_\_\_.



**DETAILED ACTION*****Double Patenting***

1. The nonstatutory double patenting rejection is based on a judicially created doctrine grounded in public policy (a policy reflected in the statute) so as to prevent the unjustified or improper timewise extension of the "right to exclude" granted by a patent and to prevent possible harassment by multiple assignees. A nonstatutory obviousness-type double patenting rejection is appropriate where the conflicting claims are not identical, but at least one examined application claim is not patentably distinct from the reference claim(s) because the examined application claim is either anticipated by, or would have been obvious over, the reference claim(s). See, e.g., *In re Berg*, 140 F.3d 1428, 46 USPQ2d 1226 (Fed. Cir. 1998); *In re Goodman*, 11 F.3d 1046, 29 USPQ2d 2010 (Fed. Cir. 1993); *In re Longi*, 759 F.2d 887, 225 USPQ 645 (Fed. Cir. 1985); *In re Van Ornum*, 686 F.2d 937, 214 USPQ 761 (CCPA 1982); *In re Vogel*, 422 F.2d 438, 164 USPQ 619 (CCPA 1970); and *In re Thorington*, 418 F.2d 528, 163 USPQ 644 (CCPA 1969).

A timely filed terminal disclaimer in compliance with 37 CFR 1.321(c) or 1.321(d) may be used to overcome an actual or provisional rejection based on a nonstatutory double patenting ground provided the conflicting application or patent either is shown to be commonly owned with this application, or claims an invention made as a result of activities undertaken within the scope of a joint research agreement.

Effective January 1, 1994, a registered attorney or agent of record may sign a terminal disclaimer. A terminal disclaimer signed by the assignee must fully comply with 37 CFR 3.73(b).

2. Claims 1-11, 13 and 16-27 are provisionally rejected on the ground of nonstatutory obviousness-type double patenting as being unpatentable over claims 1-16 of copending Application No. 10/518536. Although the conflicting claims are not identical, they are not patentably distinct from each other because the scopes of the conflicting claims both encompass a 5 layer tubular film comprised of 4 layers of polyolefin or modified polyolefin with an outer layer of polyamide. The specific polyolefins and polyamides recited in both applications are the same.

This is a provisional obviousness-type double patenting rejection because the conflicting claims have not in fact been patented.

***Claim Objections***

1. Claim 13 is objected to because of the following informalities: Claim 13 recites the compound tetra~~in~~ethylenediamine. The examiner believes applicant meant tetra~~am~~ethylenediamine. Appropriate correction is required.

***Claim Rejections - 35 USC § 112***

2. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

3. Claims 14 and 21 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

4. A broad range or limitation together with a narrow range or limitation that falls within the broad range or limitation (in the same claim) is considered indefinite, since the resulting claim does not clearly set forth the metes and bounds of the patent protection desired. See MPEP § 2173.05(c). Note the explanation given by the Board of Patent Appeals and Interferences in *Ex parte Wu*, 10 USPQ2d 2031, 2033 (Bd. Pat. App. & Inter. 1989), as to where broad language is followed by "such as" and then narrow language. The Board stated that this can render a claim indefinite by raising a question or doubt as to whether the feature introduced by such language is (a) merely exemplary of the remainder of the claim, and therefore not required, or (b) a required feature of the claims. Note also, for example, the decisions of *Ex parte Steigewald*, 131 USPQ 74 (Bd. App. 1961); *Ex parte Hall*, 83 USPQ 38 (Bd. App. 1948); and *Ex parte*

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*Hasche*, 86 USPQ 481 (Bd. App. 1949). In the present instance, claim 14 recites the broad recitation 27-48 mol %, and the claim also recites 34-48 mol % which is the narrower statement of the range/limitation and claim 21 recites the broad recitation 30-120  $\mu\text{m}$ , and the claim also recites 40-100  $\mu\text{m}$  which is the narrower statement of the range/limitation. Appropriate correction is required.

***Claim Rejections - 35 USC § 103***

5. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

6. Claims 1-11, 13 and 16-27 are rejected under 35 U.S.C. 103(a) as being unpatentable over Grund U.S. Patent No. 5,612,104 (hereafter referred to as Grund).

7. Grund teaches a five-layer film comprising a 1<sup>st</sup> and 5<sup>th</sup> layer of polyamide, a 3<sup>rd</sup> core layer of polyolefin and a 2<sup>nd</sup> and 4<sup>th</sup> adhesive layer between the polyolefin core layer and the polyamide layers. Useful polyamides for the 1<sup>st</sup> and 5<sup>th</sup> layer are recited to be at least one aliphatic polyamide and/or at least one aliphatic copolyamide and/or at least one partially aromatic polyamide and/or at least one partially aromatic copolyamide. (Col. 5, lines 3-5) Specifically, the homopolyamides and/or copolyamides are recited to be produced from monomers selected from the group of caprolactam, laurilactam (Col. 5, line 32),  $\omega$ -aminoundecanoic acid (Col. 5, lines 29-30), adipic acid, azelaic acid, sebacic acid, decanedicarboxylic acid, dodecanedicarboxylic acid (Col. 5,

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lines 27-29), terephthalic acid, isophthalic acid (Col. 5 line 67-Col. 6 line 1), tetramethylenediamine, pentamethylenediamine, hexamethylenediamine, octamethylenediamine (Col. 5, lines 23-25), and xylylenediamine (Col. 5, line 53). The thickness of the inner polyamide layer is recited to be from 1-8  $\mu\text{m}$  and the outer polyamide layer thickness from 10-40  $\mu\text{m}$ . (Col. 4, lines 50 and 67) Suitable polymers for the polyolefin core layer are recited to be homopolymers of ethylene or propylene or copolymers of linear  $\alpha$ -olefins having 2 to 8 C-atoms, or mixtures of these homopolymers or copolymers with one another. Particularly suitable are polyolefins having melting points of above 120° C., e.g., LLDPE, HDPE, polypropylene homopolymers, as well as polypropylene block copolymers and polypropylene random-copolymers. (Col. 6, lines 12-19) The thickness of the polyolefin core layer is recited to be from 10-30  $\mu\text{m}$ . (Col. 6, line 20) Suitable polyolefins for 2<sup>nd</sup> and 4<sup>th</sup> adhesive layers are recited to be modified homo- or copolymers of ethylene and/or propylene, and optionally of further linear  $\alpha$ -olefins with 3 to 8 C-atoms having grafted thereon monomers of the group consisting of  $\alpha,\beta$ -unsaturated dicarboxylic acids, such as maleic acid, fumaric acid, itaconic acid or their acid anhydrides, acid esters, acid amides or acid imides. Additionally suitable are copolymers of ethylene or propylene and optionally of further linear  $\alpha$ -olefins with 3 to 8 C-atoms having  $\alpha,\beta$ -unsaturated carboxylic acids, such as acrylic acid, methacrylic acid and/or their metallic salts and/or their alkyl esters, or adequate graft polymers of the mentioned monomers on polyolefins. The thickness of the 2<sup>nd</sup> and 4<sup>th</sup> polyolefin adhesive layers is recited to be between 4-8  $\mu\text{m}$ . (Col. 6, line 30) The film of the invention is prepared by coextrusion and subsequent biaxial

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stretching and thermosetting. (Col. 6, lines 55-56) Depending on the temperatures during thermosetting, a shrinkable or non-shrinkable film may be manufactured. (Col. 7, lines 17-19) The thickness of the film of the invention is recited to be from 30-90  $\mu\text{m}$ . (Claim 22) The film of the invention is recited to be useful for packaging sausage.

8. Grund does recite a polyolefin film for the inner layer of the tubular film, or for an.

9. It would have been obvious to one having ordinary skill in the art at the time the invention was made to have replaced the interior 1<sup>st</sup> polyamide layer of Grund with a layer of polyolefin selected from the compositions recited to comprise the 3<sup>rd</sup> and 2<sup>nd</sup> and 4<sup>th</sup> adhesive layers as recited in claim 1-3 and 7-11. Polyolefin layers are well known for their heat sealing properties in the packaging art (see for example US 5021510 or US 5759648) and replacing the polyamide layer with a polyolefin layer would have been advantageous since a polyolefin layer would be cheaper and not require a metal clamp or clip for sealing.

10. It would have been obvious to one having ordinary skill in the art at the time the invention was made to have disposed an additional polyolefin layer selected from the same compositions recited to comprise the 2<sup>nd</sup> and 4<sup>th</sup> adhesive layers as an additional layer between the 4<sup>th</sup> layer and the outside 5<sup>th</sup> polyamide layer as recited in claims 16-18. An additional layer of polyolefin would have been advantageous in order to increase the structural integrity of the laminate.

11. The limitations recited in claims 1-11, 13 and 16-27 are obvious variations/improvements to the invention recited by Grund. The use of a metallocene catalyst to produce the polyethylene disposed in the inner layer as recited in claim 4



would have also been obvious to one of ordinary skill in the art at the time the invention was made since metallocene catalyzed polyethylenes exhibit lower melting temperatures than Zeigler-Natta catalyzed polymers. This property is advantageous for heat sealing applications.

12. The limitations of melting point, density and melt flow index recited in claim 6 are not specifically enumerated by Grund but are properties that would have been obvious to optimize to one of ordinary skill in the art at the time the invention was made.

13. The methods of packaging meat products recited in claims 22 and 24 would have been obvious to one having ordinary skill in the art at the time the invention was made who desired to package meat especially since the tubular film of Grund is recited to be useful for packaging meat. It would have also been obvious to one of ordinary skill in the art at the time the invention was made to have produced a bag, food wrap or food package as recited in claims 23 and 26-27 since the tubular film of the invention is specifically recited to be useful for packaging.

14. Claim 12 is rejected under 35 U.S.C. 103(a) as being unpatentable over Grund U.S. Patent No. 5,612,104 as applied above and Idlas U.S. Patent No. 6,869,686 (hereafter referred to as Idlas).

15. Grund is silent regarding a layer of polyvinylidene copolymer constituted of at least 50% vinylidene chloride and vinyl chloride and/or methacrylate monomers.

16. Idlas teaches a polyvinylidene copolymer layer for a packaging laminate to be used for meat comprising at least 80% by weight of at least one copolymer of vinylidene

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chloride with from 2-20 wt. % (based on said copolymer) of vinyl chloride or methyl acrylate. (Col. 4, lines 48-51)

17. The motivation to use the barrier layer of Idlas with the laminate of Grund would have been as disclosed in Idlas that polyvinylidene chloride copolymer, such as Saran, and modified Saran containing methyl acrylate polymer units are frequently used in multilayer films for packaging oxygen and/or moisture sensitive foods e.g. processed pork or fresh red meat. (Col. 1, lines 21-28)

18. It would have been obvious to one having ordinary skill in the art at the time the invention was made to have added a polyvinylidene chloride copolymer as a 6<sup>th</sup> layer to the laminate of Grund in order to produce the invention as claimed in claim 12.

19. Claim 14 is rejected under 35 U.S.C. 103(a) as being unpatentable over Grund U.S. Patent No. 5,612,104 as applied above, Forloni et al. U.S. Patent No. 5,466,498 (hereafter referred to as Forloni) and Idlas U.S. Patent No. 6,869,686.

20. Grund is silent regarding a layer of ethylene vinyl alcohol copolymer with an ethylene content between 27-48 mol %.

21. Forloni teaches an ethylene vinyl alcohol barrier layer preferably comprised of 44% by weight of ethylene.

22. The motivation to combine the barrier layer of Forloni with the laminate of Grund would have been as taught by Idlas ethylene vinyl alcohol copolymer layers are frequently used in multilayer films for packaging oxygen and/or moisture sensitive foods e.g. processed pork or fresh red meat. (Col. 1, lines 21-28)

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23. It would have been obvious to one having ordinary skill in the art at the time the invention was made to have added an ethylene vinyl alcohol copolymer as a 6<sup>th</sup> layer to the laminate of Grund in order to produce the invention as claimed in claim 14.

24. Claim 15 is rejected under 35 U.S.C. 103(a) as being unpatentable over Grund U.S. Patent No. 5,612,104 as applied above and Shah U.S. Patent No. 4,724,185 (hereafter referred to as Shah).

25. Grund is silent regarding a layer of a blend ethylene vinyl alcohol copolymer and polyamide.

26. Shah teaches a barrier layer for use in food packaging that is a blend of ethylene vinyl alcohol copolymer and polyamide. (Col. 4, lines 40-42)

27. The motivation to combine the barrier layer of Shah with the laminate of Grund would have been as recited by Shah to provide a layer with good oxygen barrier properties over a wide range of moisture conditions. (Col. 2, lines 51-54)

28. It would have been obvious to one having ordinary skill in the art at the time the invention was made to have added an ethylene vinyl alcohol copolymer/polyamide blend layer as a 6<sup>th</sup> layer to the laminate of Grund in order to produce the invention as claimed in claim 15.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Michele Jacobson whose telephone number is (571) 272-8905. The examiner can normally be reached on Monday-Friday 7:30 AM-5 PM EST (First Friday off).

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If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, D. Lawrence Tarazano can be reached on (571) 272-1515. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/D. Lawrence Tarazano/  
Supervisory Patent Examiner, Art Unit 4174

Michele L. Jacobson  
Examiner  
Art Unit 4174

/M. J./